



Main

Range of product	Modicon M238 logic controller
Product or component type	Input/Output analog module
Analogue input number	2
Input level	Low level
Analogue input type	Temperature probe - 100...500 °C 3-wire Pt probe differential Thermocouple 0...1200 °C thermocouple J differential Thermocouple 0...1300 °C thermocouple K differential Thermocouple 0...400 °C thermocouple T differential
Analogue output number	1
Analogue output type	Current 4...20 mA Voltage 0...10 V
Cross talk	≤ 2 LSB

Complementary


Range compatibility	Advantys OTB Twido
Analogue input resolution	12 bits
Analogue output resolution	12 bits
LSB value	0.1 °C thermocouple 0.15 °C temperature probe 2.5 mV voltage voltage 4.8 μ A current current
Input impedance	≥ 1 MOhm
Load type	Resistive
Load impedance ohmic	≤ 300 Ohm current ≥ 2000 Ohm voltage
Stabilisation time	20 ms
Conversion time	20 ms + 1 controller cycle time
Sampling duration	≤ 20 ms temperature probe ≤ 60 ms thermocouple

Acquisition period	60 ms per channel + 1 controller cycle time thermocouple 80 ms per channel + 1 controller cycle time
Measurement error	+/- 0.2 % of full scale - 100...500 °C 3-wire Pt probe 25 °C 0.2 % of full scale +/- 4 °C 0...1200 °C thermocouple J 25 °C 0.2 % of full scale +/- 4 °C 0...1300 °C thermocouple K 25 °C 0.2 % of full scale +/- 4 °C 0...400 °C thermocouple T 25 °C +/- 0.2 % of full scale 0...10 V 0...10 V 25 °C +/- 0.2 % of full scale 4...20 mA 4...20 mA 25 °C
Temperature coefficient	+/-0.006 %FS/°C - 100...500 °C 3-wire Pt probe +/-0.006 %FS/°C 0...1200 °C thermocouple J +/-0.006 %FS/°C 0...1300 °C thermocouple K +/-0.006 %FS/°C 0...400 °C thermocouple T +/-0.015 %FS/°C 0...10 V 0...10 V +/-0.015 %FS/°C 4...20 mA 4...20 mA
Repeat accuracy	+/-0.5 %FS input/output
Non-linearity	+/- 0.2 %FS temperature probe +/- 0.2 %FS thermocouple +/- 0.2 %FS current current +/- 0.2 %FS voltage voltage
Output error	+/- 1 %FS
Output ripple	<= 1 LSB
Total error	+/-1 %FS temperature probe +/-1 %FS thermocouple +/-1 %FS current current +/-1 %FS voltage voltage
Type of cable	Shielded cable
Insulation between channel and internal logic	Photocoupler
Supply	External supply
[Us] rated supply voltage	24 V DC
Supply voltage limits	19.2...30 V
Electrical connection	1 removable screw terminal block
Current consumption	50 mA 24 V DC external 50 mA 5 V DC internal
Product weight	0.085 kg

Environment

Dielectric strength	500 V between I/O channel 500 V between the I/O and internal logic 500 V between the I/O and the external supply circuit
Width	23.5 mm
Depth	70 mm
Height	90 mm

Offer Sustainability

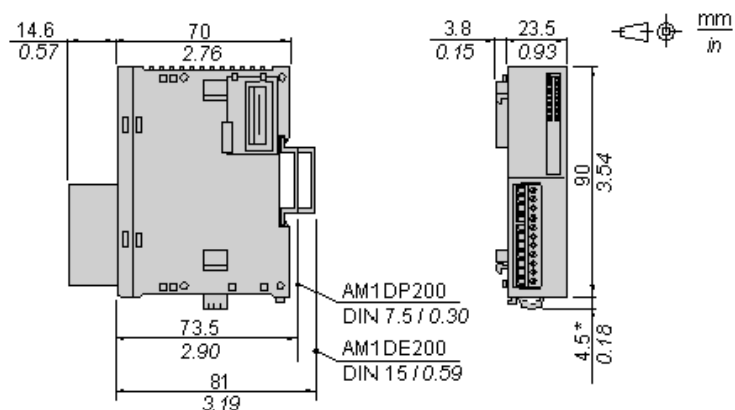
Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 1039 - Schneider Electric declaration of conformity  Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available

Contractual warranty

Warranty period	18 months
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Analog Mixed I/O Module (3-channel, Thermocouple/Temperature Probe/Voltage/Current)

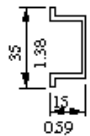
Dimensions



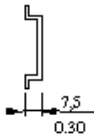
NOTE: * 8.5 mm (0.33 in) when the clip-on lock is pulled out.

DIN Rail Mounting

AM1DE200
IEC/EN 60715



AM1DP200



AM1ED200



DZ5MB200

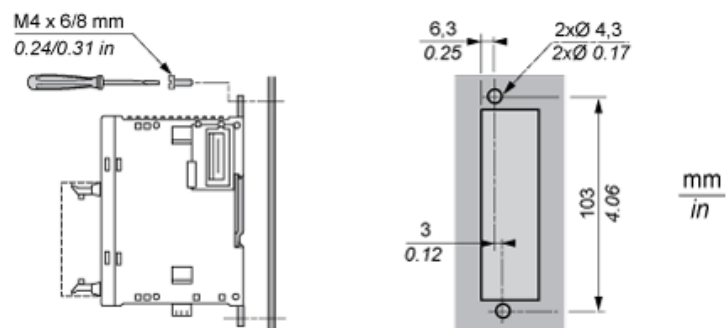


Rail depth	Catalogue part number
15 mm (0.59 in.)	AM1DE200
7,5 mm (0.30 in.)	AM1DP200

NOTE: Do not use AM1ED200 and DZ5MB200

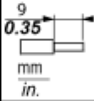







Module Mounting on a Panel Surface

Mounting Hole Layout



Wiring Requirements

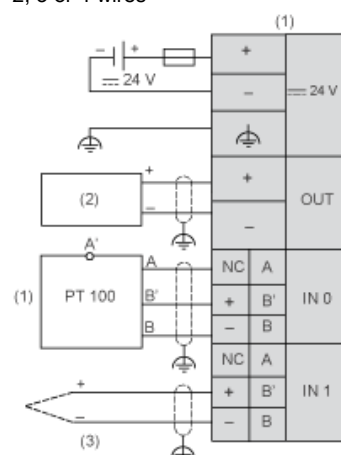
Cable Types and Wire Sizes for Removable Screw Terminal Block

							
mm ²	0,14...1,5	0,25...0,5	0,25...1,5	0,14...0,5	0,14...0,75	0,25...0,34	0,5
AWG	26...16	24...20	24...16	26...20	26...18	24...22	20

Analog Mixed I/O Module (3-channel, Thermocouple/Temperature Probe/Voltage/Current)

Wiring Diagram Example

2, 3 or 4 wires



- (1) 4 wires
- (2) Voltage/current preactuator
- (3) Thermocouple